

**ABSTRACT**

**[0070]** A method of and system for supporting a handover decision in a wireless communication system is described. An estimate of the position, velocity or direction of motion of a subscriber station is obtained. The estimate, or information derived there-from, is then used to support a handover decision. In one embodiment, an estimate of the velocity of the subscriber station is obtained if the handover rate experienced by the subscriber station exceeds a threshold while the subscriber station is within the coverage area of an umbrella cell. A decision is made to handover the subscriber station to the umbrella cell if the estimate of the velocity of the subscriber station exceeds a threshold. In a second embodiment, one or more estimates of the position, velocity, or direction of motion of the subscriber station are obtained responsive to the subscriber station experiencing a directed retry condition. A decision is made to handover the subscriber station from a serving cell to a target cell if the one or more estimates indicate that (1) the subscriber station is located closer to the target cell than the serving cell; or (2) the subscriber station is moving towards the target cell and away from the serving cell.